

## SOUTH AFRICAN RADIO LEAGUE NEWS FOR SUNDAY 09 July 2017

Good morning and welcome to the weekly news bulletin of the South African Radio League read by ..... [your name, call sign and QTH]

You may tune in to the South African Radio League news bulletin on Sunday mornings, at 08:15 Local Time in Afrikaans and at 08:30 Local Time in English, on HF as well as on many VHF and UHF repeaters around the country. Echolink listeners may connect to ZS0JPL for a relay. A podcast is available from the League's web site.

This audio bulletin may be downloaded from the League's website at [www.sarl.org.za](http://www.sarl.org.za) where you will find this as well as previous bulletins in text format under the news link on the left-hand side of the web page. While you are there, you may sign up to receive future bulletins by e-mail.

In the news, today:

THE SARL RADAR CHALLENGE

RADIO ZS ANTENNA DESIGN COMPETITION

and

THE MOST POWERFUL SIGNALS IN THE WORLD

Stay tuned for more information on these and other interesting news items.

### THE SECOND RaDAR CHALLENGE ON 15 JULY

The second RaDAR Challenge of 2017 takes place on Saturday 15 July from 00:00 to 23:59 UTC. The RaDAR "Challenge" is a unique event aimed at promoting the use of Rapidly Deployable Amateur Radio stations. Categories may be changed at any time during the challenge. The points system is so structured as to encourage portable RaDAR operations especially moveable RaDAR stations. RaDAR operators are encouraged to be self-sufficient during each challenge, with not only power supply and communications equipment but food, water, protective clothing and shelter, not forgetting the first aid kit.

Each operator is to plan his or her maximum, single period, four hour operation. He or she should consider propagation with the ultimate goal of inter-continental RaDAR to RaDAR communications in mind and a 10-point bonus! The RaDAR challenge requires more than a minimalistic information exchange. Accurate information exchange is considered more important than a large QSO count. The exchange is your call sign, your name, RS or RST report, QTH and grid locator. Log sheets must be submitted by 29 July and sent by e-mail to [edleighton@gmail.com](mailto:edleighton@gmail.com)

### THE WINTER QRP CONTEST NEXT SATURDAY

The Winter QRP Contest runs from 12:00 to 15:00 UTC on Saturday 15 July 2017 with SSB and CW activity using 5 watts or less. The first hour is limited

to the 40 m band only, the remaining two hours the testers are free to use any HF (non-WARC) band as they see fit.

The exchange is a RS or RST report and your grid locator. Please consider exchanging realistic RS or RST signal reports and use the full 6-character grid locator. Logs, in ADIF, Cabrillo or MS Excel format and labelled "your call sign" QRP Contest, shall be submitted by 22 July 2017 by e-mail to contest@sarl.org.za

Please consult the 2017 SARL Contest Manual for the rules of both contests.

#### RADIO ZS ANTENNA DESIGN COMPETITION

You do not have to be an antenna expert to be a winner. Just send us your best design and we will evaluate it according to the competition rules. Even if your design does not earn a prize, it might still be eligible for publication in a future issue of Radio ZS. We can accept only one entry per person or team, so choose your category wisely. Don't wait too long, the deadline is 1 October 2017!

You can choose from three categories - 160 metres and lower, HF or VHF/UHF and higher. Entries must include drawings with dimensions, a list of materials required to build the antenna, the antenna must be made from easy to get items - available in your local hardware store, a description and summary of any measurements taken (including SWR data), photographs of the installed antenna, the entry category you have chosen for your design and your name, postal address, and e-mail address. Only one entry per individual or team will be accepted. Entrants must be SARL members.

Send your entry to: Radio ZS Antenna Design Competition, PO Box 12104, Brandhof, 9324 or by e-mail to radiozs@sarl.org.za. In the subject line, add your call sign and the words Antenna Design Competition. Get all the details in the July 2017 Radio ZS. The first entry has been received.

You are listening to a news Bulletin of the South African Amateur Radio League.

#### THE MOST POWERFUL RADIO SIGNALS IN THE WORLD ARE ON SHF

Rory Norton, ZS2BL, at Port Elizabeth drew our attention on the forum to the powerful transmitters that are used on the VLF and ELF bands with output powers ranging up to 14 Megawatts, and very large antenna systems. But all these stations are eclipsed by the extremely high-power klystron transmitters that are currently in use in the field of radio astronomy. Carl Sagan and Frank Drake used this type of transmitter at Arecibo, Puerto Rico, to send the most powerful radio signal ever from Earth into space. The radiated power was 20 Terawatts generated by a 20 Magawatt klystron for a period of five minutes and carried a digital message. The signal was travelling in the direction of the constellation of Hercules, which happened to be overhead at the time. Stanford University has designed klystrons with an output up to 150 Megawatts operating on 500 kiloVolts. Tests have already produced 1 Gigawatt of power when using micro-second pulses and higher powers are being planned. Continuous radar

signals are used in radio astronomy to map obscure surfaces such as the planet Venus, or pulsed radar to measure distances in the Solar system. When the SKA comes on stream in 2024 then radio astronomy can also boast the largest antenna system in the world.

#### WHY EVERY LICENSED RADIO AMATEUR SHOULD SUPPORT THE IARU?

When AM broadcasting was inaugurated after World War I and amateur radio banned worldwide, governments realized that the radio spectrum had become valuable real estate. It was a wake-up call for all radio amateurs. To exist, Amateur Radio must have access to the radio frequency spectrum otherwise our equipment would be useless, like a boat without water. The American Radio Relay League (ARRL) with their president Hiram Percy Maxim, 1AW, pleaded with the US Congress for some amateur radio spectrum, and in October 1919 the US government allocated all the useless wavelengths below 200 metres to radio amateurs in the USA. Soon several other countries in the world also followed suit. When the IARU was founded it offered protection for amateur radio and could liaise with the ITU. Read the full story in the July issue of RADIO ZS, now online for SARL members.

#### BEACON NEWS

The Beaconeers are reporting good participation from ZS1, ZS5 and ZS5 members on the 60 m band where they are still collecting data for the next ICASA report on the 5 MHz allocation. However, there is a severe shortage of WSPR beacons in ZS 3 and ZS 4 divisions to complete the data collection. Any amateur who is interested in assisting in those areas are welcome to contact Leon Uys, ZR6LU, on WhatsApp 082 573 5580 or e-mail [leonuys@gmail.com](mailto:leonuys@gmail.com). PROPAGATION REPORT

Hannes Coetzee, ZS6BZP, reports that the solar activity is expected to be at low levels. There is currently no threat of strong solar flares from the single visible sunspot. If you want to do your own frequency predictions, the expected effective sunspot number for the week will be around five. The 20 and 30 m bands will provide lots of DX fun. 60 m will be the best band during day time for shorter distance, local contacts. Please visit the website [spaceweather.sansa.org.za](http://spaceweather.sansa.org.za) for further information.

Finally, a Diary of some upcoming events:

14 to 16 July Ham Radio 2017 at Friedrichshafen, Germany 15 July the RaDAR Challenge and the Winter QRP Contest 23 July the ZS2 Sprint 29 and 30 July the RSGB IOTA Contest 06 August the SARL HF phone contest 19 and 20 August International Lighthouse Weekend 20 August the SARL HF Digital Contest

To conclude our bulletin a quick overview of our main news item

The second RaDAR Challenge of 2017 takes place on Saturday 15 July from

00:00 to 23:59 UTC. The RaDAR “Challenge” is a unique event aimed at promoting the use of Rapidly Deployable Amateur Radio stations. Categories may be changed at any time during the challenge. The points system is so structured as to encourage portable RaDAR operations especially moveable RaDAR stations. RaDAR operators are encouraged to be self-sufficient during each challenge, with not only power supply and communications equipment but food, water, protective clothing and shelter, not forgetting the first aid kit.

This brings us to the end of this bulletin

Clubs and individuals are invited to submit news items of interest to radio amateurs and shortwave listeners, if possible, in both English and Afrikaans, by following the news inbox link on the South African Radio League web page. News items for inclusion in the bulletin should reach the news team no later than the Thursday preceding the bulletin date.

You are welcome to join us every Sunday morning for the weekly amateur radio program, ‘Amateur Radio Today’ at 10:00 Central African Time. The program can be heard on VHF and UHF repeaters countrywide and on 7 082 kHz lower side-band and on 7 205 kHz and 17 760 kHz AM. There is also a podcast available from Dick Stratford, ZS6RO. A rebroadcast can be heard on Monday evenings at 18:30 Central African Time on 3 230 kHz AM.

We welcome your signal reports, comments and suggestions; please send these by e-mail to [artoday@sarl.org.za](mailto:artoday@sarl.org.za). Sentech sponsors the radio transmissions on the non-amateur frequencies.

You have listened to a news bulletin compiled by Andy Cairns, ZS6ADY, edited by Dick Stratford, ZS6RO, and read by .....

From the news team, best wishes for the week ahead.

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